n Practitioner's Docket No. \_\_\_\_51757\_\_\_\_\_

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**Box Patent Application Assistant Commissioner for Patents Washington, D.C. 20231** 

### NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): Dana A. GRONBECK, Michael K. GALLAGHER, Jeffrey M. CALVERT and Timothy G. ADAMS

**WARNING:** 37 CFR 1.41(a)(1) points out:

"(a) A patent is applied for in the name or names of the actual inventor or inventors.

(1) The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by  $\S$  1.63, except as provided for in  $\S$  1.53(d)(4) and  $\S$  1.63(d). If an oath or declaration as prescribed by  $\S$  1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to  $\S$  1.53(b), unless a petition under this paragraph accompanied by the fee set forth in  $\S$  1.17(i) is filed supplying or changing the name or names of the inventor or inventors."

For (title): ELECTRONIC DEVICE MANUFACTURE

### **CERTIFICATION UNDER 37 C.F.R. 1.10\***

(Express Mail label number is mandatory.)
(Express Mail certification is optional.)

I hereby certify that this correspondence and the documents referred to as attached therein are being deposited with the United States Postal Service on this date \_\_\_\_\_\_, in an envelope as "Express Mail Post Office to Addressee," mailing Label Number \_\_\_\_\_\_ EV342619331US \_\_\_\_\_\_, addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Deanna M. Rivernider

(type or print name of person mailing paper)

Signature of person mailing paper

WARNING: Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. 1.8 cannot be used to

obtain a date of mailing or transmission for this correspondence.

\*WARNING: Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing, 37 C.F.R. 1.10(b).

"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will

not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

### 1. Type of Application

This new application is for a(n)

(check one applicable item below)

	[X]	Original (nonprovisional)
	[]	Design
	[]	Plant
WARNI	NG:	<b>Do not</b> use this transmittal for a completion in the U.S. of an International Application under 35 U.S.C. 371(c)(4), unless the International Application is being filed as a divisional, continuation or continuation-in part application.
WARNI	NG:	Do not use this transmittal for the filing of a provisional application.
NOTE:	TRANSM	the following 3 items apply, then complete and attach ADDED PAGES FOR NEW APPLICATION IITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED and a NOTIFICATION IN PARENT ATION OF THE FILING OF THIS CONTINUATION APPLICATION.
	[]	Divisional.
	[]	Continuation.
	[]	Continuation-in-part (C-I-P).
2.	Benefi	t of Prior U.S. Application(s) (35 U.S.C. 119(e), 120, or 121)
NOTE:	applicati nonprovi internati at least c claimed	ovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional cons or copending international applications designating the United States of America. In order for a isional application to claim the benefit of a prior filed copending nonprovisional application or copending onal application designating the United States of America, each prior application must name as an inventor one inventor named in the later filed nonprovisional application and disclose the named inventor's invention in at least one claim of the later filed nonprovisional application in the manner provided by the first on 635 U.S.C. 112. Each prior application must also be:
		(i) An international application entitled to a filing date in accordance with PCT Article 11 and designating the United States of America; or
		(ii) Complete as set forth in § 1.51(b); or
		(iii) Entitled to a filing date as set forth in § 1.53(b) or § 1.53(d) and include the basic filing fee set forth in § 1.16; or
		(iv) Entitled to a filing date as set forth in § 1.53(b) and have paid therein the processing and retention fee

37 CFR 1.78(a)(1).

NOTE If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., or benefit of a prior provisional application is claimed, then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

set forth in § 1.21(1) within the time period set forth in § 1.53(f).

**WARNING:** 

If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. 120, 121 or 365(c). (35 U.S.C. 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. 119, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

**WARNING:** 

When the last day of pendency of a provisional application falls on a Saturday, Sunday, or Federal holiday within the District of Columbia, any nonprovisional application claiming benefit of the provisional application must be filed prior to the Saturday, Sunday, or Federal holiday within the District of Columbia. See 37 C.F.R. § 1.78(a)(3).

[X] The new application being transmitted claims the benefit of prior U.S. application(s). Enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

### 3. Papers Enclosed

1 Pages of Abstract
Other

Α.	-	Required for Filing Date under 37 C.F.R. 1.53(b) (Regular) or 37 C.F.R. 1.153 (Design) Application					
	28 3 6	Pages of Specification Pages of Claims Sheets of Drawing					
		[ ] Formal [ ] Informal					
В.	Other	Paners Enclosed					

WARNING:

**DO NOT** submit original drawings. A high quality copy of the drawings should be supplied when filing a patent application. The drawings that are submitted to the Office must be on strong, white, smooth, and non-shiny paper and meet the standards according to § 1.84. If corrections to the drawings are necessary, they should be made to the original drawing and a high-quality copy of the corrected original drawing then submitted to the Office. Only one copy is required or desired. For comments on proposed then-new 37 C.F.R. 1.84, see Notice of March 9, 1988 . . . (1990 O.G. 57-62).

NOTE: "Identifying indicia, if provided, should include the application number or the title of the invention, inventor's name, docket number (if any), and the name and telephone number of a person to call if the Office is unable to match the drawings to the proper application. This information should be placed on the back of each sheet of drawing a minimum distance of 1.5 cm. (5/8 inch) down from the top of the page." 37 C.F.R. 1.84(c)).

(complete the following, if applicable)

[ ] The enclosed drawing(s) are photograph(s), and there is also attached a "PETITION TO ACCEPT PHOTOGRAPH(S) AS DRAWING(S)." 37 C.F.R. 1.84(b).

4.	Additio	onai Paj	pers Enclosed
	[ ] [X] [X] [ ] [ ]	Information Form Pictation Declarate Submissipertain sequent Author	ation of Biological Deposit ssion of "Sequence Listing," computer readable copy and/or amendment ing thereto for biotechnology invention containing nucleotide and/or amino acid
5.	Declar	ation or	·Oath
NOTE:	nonprove the inven executed is submit inventors that decl under §	isional applitors name declaration tted. The constituted of the application m 1.47 has s	declaration is not required in a continuation or divisional application provided the prior plication contained a declaration as required, the application being filed is by all or fewer than all ed in the prior application, there is no new matter in the application being filed, and a copy of the on filed in the prior application (showing the signature or an indication thereon that it was signed) topy must be accompanied by a statement requesting deletion of the names of person(s) who are not application being filed. If the declaration in the prior application was filed under § 1.47 then a copy of ust be filed accompanied by a copy of the decision granting § 1.47 status or, if a nonsigning person ubsequently joined in a prior application, then a copy of the subsequently executed declaration mus FR 1.63(d).
NOTE:	identify e together	each inven with any c	to complete an application must be executed, identify the specification to which it is directed, itor by full name, including the family name, and at least one given name without abbreviation other given name or initial, and the residence, post office address and country of citizenship of each whether the inventor is a sole or joint inventor. 37 CFR 1.63(a)(1)-(4).
	[]	Enclose	ed
		Execut	ed by (check <b>all</b> applicable boxes)
		[][]	inventor(s).  legal representative of inventor(s). 37 CFR 1.42 or 1.43.  joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.  [ ] This is the petition required by 37 CFR 1.47 and the statement required by 37 CFR 1.47 is also attached. See item 13 below for fee.
	[X]	Not En	closed.
NOTE:	applicati continua	on contail tion or co	a completion in the U.S. of an International Application, or where the completion of the U.S. ns subject matter in addition to the International Application, the application may be treated as a ntinuation-in-part, as the case may be, utilizing ADDED PAGE FOR NEW APPLICATION CHERE BENEFIT OF PRIOR U.S. APPLICATION CLAIMED.
		[]	Application is made by a person authorized under 37 C.F.R. 1.41(c) on behalf of all the above named inventor(s).

NOTE:	It is impo	rtant that	all the correct inventor(s) are named for filing under 37 CFR 1.41(c) and 1.53(b).
			[ ] Showing that the filing is authorized.  (not required unless called into question. 37 CFR 1.41(d))
6.	Invento	orship S	tatement
WARNII	VG:	If the nam of the var	ned inventors are each not the inventors of all the claims an explanation, including the ownership ious claims at the time the last claimed invention was made, should be submitted.
The inv	entorshi	p for all	the claims in this application are:
	[]	The san	ne. or
	[]	the last	same. An explanation, including the ownership of the various claims at the time claimed invention was made, is submitted. will be submitted.
7.	Langua	age	
translation of the non-English language application and the process		on of the n	uding a signed oath or declaration may be filed in a language other than English. An English on-English language application and the processing fee of \$130.00 required by 37 CFR 1.17(k) is with the application, or within such time as may be set by the Office. 37 CFR 1.52(d).
	[X]	English Non-En	
		[]	The attached translation includes a statement that the translation is accurate. 37 C.F.R. 1.52(d).
8.	Assign	ment	
	[X]	An assi	gnment of the invention to Shipley Company, L.L.C. of Marlborough, Massachusetts
		[]	is attached. A separate [ ] "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or [ ] FORM PTO 1595 is also attached.
		[ ] [X]	was filed in the parent application will follow.
NOTE:	"If an as the assig	ssignment i gnment" N	is submitted with a new application, send two separate letters-one for the application and one for otice of May 4, 1990 (1114 O.G. 77-78).
WARNI	NG:	A newly of	executed "STATEMENT UNDER 37 CFR 3.73(b)" must be filed when a continuation-in-part ion is filed by an assignee. Notice of April 30, 1993, 1150 O.G. 62-64.

(The declaration or oath, along with the surcharge required by 37 CFR 1.16(e), can be filed subsequently).

### 9. Certified Copy

Certified copy(ies) of application(s)

Country	Appln. No.	Filed
from which priority is claimed  [ ] is enclosed. [ ] was filed. [ ] will follow.		

NOTE: The foreign application forming the basis for the claim for priority must be referred to in the oath or declaration. 37 CFR 1.55(a) and 1.63.

NOTE: This item is for any foreign priority for which the application being filed directly relates. If any parent U.S. application or International Application from which this application claims benefit under 35 U.S.C. 120 is itself entitled to priority from a prior foreign application, then complete item 18 on the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

### 10. Fee Calculation (37 C.F.R. 1.16)

### A. [X] Regular application

Claims	Number Filed	Basic Fee Allowance	Number Extra	Rate	Basic Fee 37 C.F.R. 1.16(a) \$750.00
Total Claims (37 CFR 1.16(c))	21	- 20 =	1	x \$ 18.00	\$18.00
Independent Claims (37 CFR 1.16(b))	5	- 3 =	2	x \$84.00	\$168.00
Multiple Dependent Claim(s), if any (37 CFR 1.16(d))			+	\$280.00	\$0

	( ")
[] []	Amendment canceling extra claims is enclosed.  Amendment deleting multiple-dependencies is enclosed.  Fee for extra claims is not being paid at this time.

NOTE: If the fees for extra claims are not paid on filing they must be paid or the claims cancelled by amendment, prior to the expiration of the time period set for response by the Patent and Trademark Office in any notice of fee deficiency. 37 CFR 1.16(d).

Filing Fee Calculation	\$	936.00
------------------------	----	--------

	В.	l J		n applica 00—37		16(f)) Filing Fee Ca	alculation	\$		
	C.	[]		application of the second seco		_		\$		
11.	Small	Entity S	Stateme	nt(s)						
	[]	Statem attache	• •	nat this	is a fil	ing by a small	entity under	r 37 CFR 1.9	and 1.27 is	(are)
WARN	ING:	available or patent in division, a reissue continuit 121, or applicate the states or in the	e and desi t, includir t which th or contin e applicat ng or reis 365(c) oj ion or in th e patent a	red. Status ng applican ne status ho nation-in-p nion requir sue applic n a prior o nhe patent ne prior app nd status o	s as a sma tions or p as been e part (incl es a new ation. A application if the non plication as a sma	ecifically established all entity in one apportents which are destablished. The refunding a continued portent apportent apportent apportent apportent application in the patent or it lentity is still propuch a reference for	olication or patelirectly or indirialing of an applorosecution applorosecution applorosecution claiming polication or the reincludes a copyper and desired	ent does not affected of the desired of the statement of the statement of the payment of the payment of the payment of the grayment of the graymen	at any other applice 1.53 as a contin 1.53(d)), or the july 1.54(d) 1.55(d)), or the july 1.55(d)), or the jul	lication ation of nuation filing of for the fe), 120 te prior rence to lication
				(com	plete th	e following, if a	pplicable)			
	[]	Status a	as a sma	ll entity		nimed in prior ap				filed
		35 U.S	.C. §	[]	119(e 120, 121, 365(c	),	J	·	•	
		and wh	ich stati	ıs as a sr	nall ent	ity is still prope	r and desired	<b>1</b> .		
		[ ] Filing I				nt in the prior ap	-	included. \$	_	
NOTE:						d if a small entity . The two-month pe				
12.	Reques	st for In	ternatio	onal-Typ		<b>ch</b> (37 C.F.R. 1. plete, if applicab				
	[]					al-type search r erits takes place	-	is application	at the time	when

13.	Fee Payment Being Made at This Time								
	[]	Not E	Enclosed						
		[]	No filing fee is to be paid at this time. (This and the surcharge required by 37 C.F.R. 1.16	6(e) can be paid subsequently.)					
	[X]	Enclo	osed						
		[X]	Filing fee	\$ 936.00					
		[]	Recording assignment (\$40.00; 37 C.F.R. 1.21(h)) (See attached "COVER SHEET FOR ASSIGNMENT ACCOMPANYING NEW APPLICATION.")	\$					
		[]	Petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached (\$130.00; 37 C.F.R. 1.47 and 1.17(i))	\$					
		[]	For processing an application with a specification in a non-English language (\$130.00; 37 C.F.R. 1.52(d) and 1.17(k))	\$					
		[]	Processing and retention fee (\$130.00; 37 C.F.R. 1.53(d) and 1.21(l))	\$					
		[]	Fee for international-type search report (\$40.00; 37 C.F.R. 1.21(e))	\$					
NOTE:	applicati order to	on pursu obtain t	establishes a fee for processing and retaining any application that uant to 37 CFR 1.53(f) and this, as well as the changes to 37 Clube benefit of a prior U.S. application, either the basic filing fer 1.21(l) must be paid, within 1 year from notification under § 53(f)	FR 1.53 and 1.78(a)(1), indicate that in e must be paid, or the processing and					
			Total Fees Enclosed	\$ 936.00					
14.	Metho	d of Pa	ayment of Fees						
	[X]	Chec	k in the amount of \$ <u>936.00</u>						
	[]		ge Account No in the amount of \$ plicate of this transmittal is attached.						
15.	Autho	orization to Charge Additional Fees							
WARNI	ING:	If no fe	ees are to be paid on filing, the following items should <u>not</u> be comp	pleted.					
WARNI	ING:		ately count claims, especially multiple dependent claims, to avoid es are authorized.	unexpected high charges, if extra claim					
	[X]		Commissioner is hereby authorized to charge the for						

13.

X		
NOTE: Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 CFR 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.  [X] 37 C.F.R. 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)  [X] 37 C.F.R. 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a).  [X] 37 C.F.R. 1.17 (application processing fees)  NOTE: "A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 CFR 1.136(a)(3).  [] 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))  NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.38(b) requires "Notification of any charge in status resulting in loss of entitlement to small entity status must be filed in the application prior to paying, or at the time of paying issue fee." From the wording of 37 CFR 1.		[X] 37 C.F.R. 1.16(a), (f) or (g) (filing fees)
NOTE: Because additional fees for excess or multiple dependent claims not paid on filling or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 CFR 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.  [X] 37 C.F.R. 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)  [X] 37 C.F.R. 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a).  [X] 37 C.F.R. 1.17 (application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension. Of time fees will be treated as a constructive petition for an extension of time in any concurrent or filter reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 CFR 1.136(a)(3).  [] 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))  NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.31(b):  NOTE: 37 C.F.R. 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small enti		
paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 CFR 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.  [X] 37 C.F.R. 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)  [X] 37 C.F.R. 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a).  [X] 37 C.F.R. 1.17 (application processing fees)  NOTE: "A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 CFR 1.136(a)(3).  [] 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))  NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.311(b)).  NOTE: 37 CFR 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application prior to paying, or at the time of paying issue fee." From the wording of 37		
date later than the filing date of the application)  [X] 37 CFR 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a).  [X] 37 C.F.R. 1.17 (application processing fees)  NOTE: "A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission. "37 CFR 1.136(a)(3).  [] 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))  NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 C.F.R. 1.311(b)).  NOTE: 37 C.F.R. 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application prior to paying, or at the time of paying, issue fee." From the wording of 37 C.F.R. 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.  16. Instructions as to Overpayment  NOTE: " Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the pay	NOTE:	paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 CFR 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except
[X] 37 CFR 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a).  [X] 37 C.F.R. 1.17 (application processing fees)  NOTE: "A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 CFR 1.136(a)(3).  [] 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))  NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.311(b)).  NOTE: 37 C.F.R. 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application prior to paying, or at the time of paying, issue fee. "From the wording of 37 C.F.R. 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.  16. Instructions as to Overpayment  NOTE: " Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five doll		
NOTE: "A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 CFR 1.136(a)(3).  [] 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))  NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.311(b)).  NOTE: 37 CFR 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application prior to paying, or at the time of paying, issue fee." From the wording of 37 CFR 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.  16. Instructions as to Overpayment  NOTE: " Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 CFR 1.26(a).		
NOTE: "A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or future reply requiring a petition for an extension of time in for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 CFR 1.136(a)(3).  [ ] 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))  NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.311(b)).  NOTE: 37 CFR 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application prior to paying, or at the time of paying issue fee." From the wording of 37 CFR 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.  16. Instructions as to Overpayment  NOTE: " Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 CFR 1.26(a).		
requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 CFR 1.136(a)(3).  [ ] 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))  NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.311(b)).  NOTE: 37 CFR 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application prior to paying, or at the time of paying, issue fee." From the wording of 37 CFR 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.  16. Instructions as to Overpayment  NOTE: " Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 CFR 1.26(a).		[]
NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.311(b)).  NOTE: 37 CFR 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application prior to paying, or at the time of paying, issue fee." From the wording of 37 CFR 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.  16. Instructions as to Overpayment  NOTE: " Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 CFR 1.26(a).	NOTE:	requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under $\S$ 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in $\S$ 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a
Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.311(b)).  NOTE: 37 CFR 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application prior to paying, or at the time of paying, issue fee." From the wording of 37 CFR 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.  16. Instructions as to Overpayment		
filed in the application prior to paying, or at the time of paying, issue fee." From the wording of 37 CFR 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.  16. Instructions as to Overpayment  NOTE: " Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 CFR 1.26(a).	NOTE:	Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance.
NOTE: " Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 CFR 1.26(a).	NOTE:	filed in the application prior to paying, or at the time of paying, issue fee." From the wording of 37 CFR 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is
will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 CFR 1.26(a).	16.	Instructions as to Overpayment
[X] Credit Account No. 04-1105	NOTE:	will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by
		[X] Credit Account No. 04-1105

[]

Reg. No. 42,378

Customer No.:

Tel. No.: (508) 229-7545

Refund

SIGNATURE OF PRACTITIONER

c/o EDWARDS & ANGELL, LLP

S. Matthew Cairns

Boston, MA 02209

P.O. Box 9169

P.O. Address

(type or print name of practitioner)

[X]	Incorporation by reference of added pages
-----	---

(check the following item if the application in this transmittal claims the benefit of prior U.S. application(s) (including an international application entering the U.S. stage as a continuation, divisional or C-I-P application) and complete and attach the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED)

	[X]	Plus Added Pages for New Application Transmittal Where Benefit of Prior U.S.	
		Application(s) Claimed  Number of pages added5	
	[X]	Plus Added Pages for Papers Referred to in Item 4 Above  Number of pages added4	
	[]	Plus added pages deleting names of inventor(s) named on prior application(s) who is/are no longer inventor(s) of the subject matter claimed in this application.  Number of pages added	
	[]	Plus "Assignment Cover Letter Accompanying New Application"  Number of pages added	
[]	Statement Where No Further Pages Added		
		further pages form a part of this Transmittal, then end this Transmittal with this page and the following item)	
	[]	This transmittal ends with this page.	

PA	7	Ŧ	٨	T
1 1		Li	( 7	

Practitioner's Docket No.	51757	
Tractitudici S Ducket 110.	31/3/	

# ADDED PAGES FOR APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED

NOTE: See 37 CFR 1.78.

#### 17. Relate Back

WARNING: If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. 120, 121 or 365(c). (35 U.S.C. 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. 119, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

(complete the following, if applicable)

[X] Amend the specification by inserting, before the first line, the following sentence:

### A. 35 U.S.C. 119(e)

NOTE: "Any nonprovisional application claiming the benefit of one or more prior filed copending provisional applications must contain or be amended to contain in the first sentence of the specification following the title a reference to each such prior provisional application, identifying it as a provisional application, and including the provisional application number (consisting of series code and serial number)." 37 C.F.R. § 1.78(a)(4).

[X] "This application claims the benefit of U.S. Provisional Application(s) No(s).:

APPLICATION NO(S).:	FILING DATE
60/413,265	September 24, 2002 "

### B. 35 U.S.C. 120, 121 and 365(c)

NOTE: "Except for a continued prosecution application filed under § 1.53(d), any nonprovisional application claiming the benefit of one or more prior filed copending nonprovisional applications or international applications designating the United States of America must contain or be amended to contain in the first sentence of the specification following the title a reference to each such prior application, identifying it by application number (consisting of the series code and serial number) or international application number and international filing date and indicating the relationship of the applications. . . . Cross-references to other related applications may be made when appropriate." (See § 1.14(a)). 37 C.F.R. § 1.78(a)(2).

[]	"This application is a		
	[ ] continuation		
	[ ] continuation-in-part		
	[ ] divisional		
of c	opending application(s)		
[]	application numberfile	ed on	
[]	International Applicationdesignated the U.S."	filed on	and which
NOTE:	The proper reference to a prior filed PCT application the filing date of the PCT application that designated to	that entered the U.S. national pho he U.S.	ase is the U.S. serial number and
NOTE:	(1) Where the application being transmitted adds subject matter to the International Application, then the filing can be as a continuation-in-part or (2) if it is desired to do so for other reasons then the filing can be as a continuation.		
NOTE:	The deadline for entering the national phase in the U April 28, 1987 (1079 O.G. 32 to 46) as follows:	J.S. for an international applicati	ion was clarified in the Notice of
	"The Patent and Trademark Office considers the Interpriority date if the United States has been designated a filed prior to the expiration of the 19th month from the Demand for International Preliminary Examination we expiration of the 19th month from the priority date communicated to the Patent and Trademark Office international application has not been communicated period respectively, the international application becompriority date respectively. These periods have been plated 1.495. A continuing application under 35 U.S.C. 36 international application."	and no Demand for International F e priority date and until the 32nd hich elected the United States of A , provided that a copy of the in within the 20 or 30 month perion to the Patent and Trademark C omes abandoned as to the United aced in the rules as paragraph (h)	Preliminary Examination has been month from the priority date if a merica has been filed prior to the ternational application has been od respectively. If a copy of the Office within the 20 or 30 month States 20 or 30 months from the of § 1.494 and paragraph (i) of §
[]	"The nonprovisional application designated/ U.S. Provisional Application(s) No(s).:	above, namely application, filed	, claims the benefit of
	U.S. Provisional Application(s) (NO(s)		
APPLI	CATION NO(S).:		FILING DATE
	_/		"
			"
ſ ]	Where more than one reference is made abo	ve please combine all refere	ences into one sentence.

### 18. Relate Back-35 U.S.C. 119 Priority Claim for Prior Application

The prior U.S. application(s), including any prior International Application designating the U.S., identified above in item 17B, in turn itself claim(s) foreign priority(ies) as follows: Filed Appln. no. Country The certified copy(ies) has (have) been filed on \_\_\_\_\_, in prior application \_\_\_\_\_, which was filed on [] is (are) attached. WARNING: The certified copy of the priority application that may have been communicated to the PTO by the International Bureau may not be relied on without any need to file a certified copy of the priority application in the continuing application. This is so because the certified copy of the priority application communicated by the International Bureau is placed in a folder and is not assigned a U.S. serial number unless the national stage is entered. Such folders are disposed of if the national stage is not entered. Therefore, such certified copies may not be available if needed later in the prosecution of a continuing application. An alternative would be to physically remove the priority documents from the folders and transfer them to the continuing application. The resources required to request transfer, retrieve the folders, make suitable record notations, transfer the certified copies, enter and make a record of such copies in the Continuing Application are substantial. Accordingly, the priority documents in folders of international applications that have not entered the national stage may not be relied on. Notice of April 28, 1987 (1079 O.G. 32 to 46). 19. Maintenance of Copendency of Prior Application The PTO finds it useful if a copy of the petition filed in the prior application extending the term for response is filed with the papers constituting the filing of the continuation application. Notice of November 5, 1985 (1060 O.G. 27). A. [] Extension of time in prior application (This item must be completed and the papers filed in the prior application, if the period set in the prior application has run.) A petition, fee and response extends the term in the pending **prior** application until \_\_\_\_\_\_. A copy of the petition filed in prior application is attached. B. [ ] Conditional Petition for Extension of Time in Prior Application (complete this item, if previous item not applicable) [ ] A conditional petition for extension of time is being filed in the pending **prior** application. [ ] A copy of the conditional petition filed in the prior application is attached.

## 20. Further Inventorship Statement Where Benefit of Prior Application(s) Claimed

(complete applicable item (a), (b) and/or (c) below)

(a)	[]	This application discloses and claims only subject matter disclosed in the prior application whose particulars are set out above and the inventor(s) in this application are
		[ ] the same.
		[ ] less than those named in the prior application. It is requested that the following inventor(s) identified for the prior application be deleted:
		(type name(s) of inventor(s) to be deleted)
(b)	[]	This application discloses and claims additional disclosure by amendment and a new declaration or oath is being filed. With respect to the prior application, the inventor(s) in this application are
		[ ] the same.
		[ ] the following additional inventor(s) have been added:
		(type name(s) of inventor(s) to be deleted)
(c)	[]	The inventorship for all the claims in this application are
		[ ] the same.
		[ ] not the same. An explanation, including the ownership of the various claims at the time the last claimed invention was made
		[ ] is submitted.
		[ ] will be submitted.
21.	Abano	donment of Prior Application (if applicable)
	[]	Please abandon the prior application at a time while the prior application is pending, or when the petition for extension of time or to revive in that application is granted, and when this application is granted a filing date, so as to make this application copending with said prior application.

NOTE: According to the Notice of May 13, 1983 (103, TMOG 6-7), the filing of a continuation or continuation-in- part application is a proper response with respect to a petition for extension of time or a petition to revive and should include the express abandonment of the prior application conditioned upon the granting of the petition and the granting of a filing date to the continuing application.

### 22. Petition for Suspension of Prosecution for the Time Necessary to File an Amendment

WAKNING:	The claims of a new application may be finally rejected in the first Office action in those situations where (1) the new application is a continuing application of, or a substitute for, an earlier application, and (2) all the claims of the new application (a) are drawn to the same invention claimed in the earlier application, and (b) would have been properly finally rejected on the grounds of art of record in the next Office action if they had been entered in the earlier application." MPEP, § 706.07(b).
reas	ere it is possible that the claims on file will give rise to a first action final for this continuation application and for some son an amendment cannot be filed promptly (e.g., experimental data is being gathered) it may be desirable to file a tion for suspension of prosecution for the time necessary.
	(check the next item, if applicable)
[ ] The	ere is provided herewith a Petition To Suspend Prosecution for the Time Necessary to File An Amendment (New Application Filed Concurrently)
23. Small ]	Entity (37 CFR § 1.28(a))
[] Ap	plicant has established small entity status by the filing of a statement in parent application No.
[]	A copy of the statement previously filed is included.
WARNING:	See 37 CFR § 1.28(a).
24. NOTII	FICATION IN PARENT APPLICATION OF THIS FILING
	notification of the filing of this eck one of the following)
[ ]	continuation continuation-in-part divisional